

Aspect Separated from Aspectual Markers in Russian and Czech

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Main points

- Derivation of morphological aspect in Russian and Czech.
Four morphological aspect markers: prefixes, SI, semelfactive, habitual.
- In Russian, aspect (interpretation) separated from prefixes and the SI suffix (Tatevosov 2011, 2015).
- Argue the same for Czech.
- Extend the separation to habitual (iterative/generic) and semelfactive markers.
- An Agree analysis of morphological aspect properties of verbal predicates and nominalizations in Russian and Czech.
- It also derives differences between Russian and Czech.

Aspectual markers

- Relevant to morphological aspect (perfectivity/imperfectivity).
- Can change morphological aspect properties of the base predicate.
- Relevant to aspect more generally: telicity, Aktionsart.
- Four types
 - Prefixes
 - Secondary imperfective marker
 - Habitual marker
 - Semelfactive marker

Aspectual markers: Prefixes

- Both lexical (1a), (2a) and superlexical (1b), (2b) prefixes perfectivize the **ipf. simplex verb** (almost always).

(1)a. [na-[kleit']^{IPF}]^{PF}
on-stick
'to stick on'

b. [na-[delat']^{IPF}]^{PF} (R)
CUM-do
'to do a lot'

(2)a. [vy-[chovat]^{IPF}]^{PF}
out-raise
'to raise'

b. [do-[plést]^{IPF}]^{PF} (Cz)
COMP-knit
'to complete knitting'

- LP or SP + **pf. simplex verb**: The predicate remains pf.

(3)a. [vy-[kupit']^{PF}]^{PF}
out-buy
'to buy sb.'s freedom'

b. [na-[kupit']^{PF}]^{PF} (R)
CUM-buy
'to buy a lot'

(4)a. [do-[dat]^{PF}]^{PF}
to-give
'to deliver'

b. [do-[říci]^{PF}]^{PF} (Cz)
COMP-say
'to say to the end'

Aspectual markers: Prefixes

- LPs and SPs can **co-occur**:

The predicate remains perfective.

SPs are outside LPs.

(5)a. [pere-[vy-polnit']^{PF}]^{PF}
EXCESS-out-fulfill
'to overfulfill'

(6)a. [pře-[vy-chovat]^{PF}]^{PF}
REP-out-raise
'to re-educate'

b. * [vy-[pere-polnit']^{PF}]^{PF} (R)
out-EXCESS-fulfill

b. * [vy-[pře-chovat]^{PF}]^{PF} (Cz)
out-REP-raise

Aspectual markers: Secondary imperfective

- Derives an ipf. predicate from a pf. predicate:

with an LP (7b'), (8b), with a certain SP (7b''), without a prefix (9).

(7)a. [za-[rabot-a-t'] ^{IPF}] ^{PF} behind/INC-work-TH-INF a'. 'to earn' a'.'. 'to start working'	→	b. [[za-[rabat] ^{IPF}] ^{PF} -yva] ^{IPF} -t' behind/INC-work-SI-INF b'. 'to earn' b'.'. 'to start working'	(R)
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(8)a. [po-[moč'] ^{IPF}] ^{PF} along-can 'to help'	→	b. [[po-[mag] ^{IPF}] ^{PF} -a] ^{IPF} -t' along-can-SI-INF 'to help'	(9)	[[d-a] ^{PF} -va] ^{IPF} -t' give-TH-SI-INF 'to give'	(R)
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- Other SPs attach outside SI, i.e. perfectivize again (10); some SPs both inside (7b) and outside (11) (Ramchand 2004, Gehrke 2008, Szucsich 2013, Tatevosov 2013, Klimek-Jankowska & Błaszczak subm.).

(10) [po-[[vy-[talk] ^{IPF}] ^{PF} -iva] ^{IPF}] ^{PF} -t' DIST-out-push-SI-INF 'to push out one after another'	(11)	[za-[[ot-[kry] ^{IPF}] ^{PF} -va] ^{IPF}] ^{PF} -t' INC-away-cover-SI-INF 'to start opening'	(R)
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- 3 markers (AG 1952): -yva-/-iva- (7b), (10), -va- (9), (11), -a-/-ja (8b), but see Matushansky (2009).
v in -va- blocks hiatus; cf. (9), (11) with (8b).

Aspectual markers: Secondary imperfective

- Derives an ipf. predicate from a pf. predicate:

with an LP (12a), (13), with some SP (14b), without a prefix (15), (17).

- (12) a. [za-bí]^{PF}-je]^{IPF}-t b. [po-[za-bí]^{PF}-je]^{IPF}]^{PF}-t (13) [vy-pros/š]^{PF}-ova]^{IPF}-t (Cz)
 behind-beat-SI-INF DIST-behind-SI-INF out-beg-SI-INF
 ‘to kill’ ‘to kill one after another’ ‘to beg’
- (14) a. [do-[plés]^{IPF}]^{PF}-t → b. [[do-[plét]^{IPF}]^{PF}-a]^{IPF}-t (15) [[d-á]^{PF}-va]^{IPF}-t (Cz)
 COMP-knit COMP-knit-SI-INF give-TH-SI-INF
 ‘to complete knitting’ ‘to complete knitting’ ‘to give’

- Other SPs are outside SI, i.e. perfectivize again (12b), and some SPs both inside (14b) and outside (16).

- (16) [do-[[vy-[plés/t]^{IPF}]^{PF}-a]^{IPF}]^{PF}-t (17) [[vrat/c]^{PF}-e]^{IPF}-t (Cz)
 COMP-out-knit-SI-INF return-SI-INF
 ‘to complete stringing’ ‘to return’

- SI markers : -(v)a-, -(j)e-, -ova- (13), -(j)e- not productive; see Petr (1986a).
v in -va- (15) and *j* in -je- (12) block hiatus; cf. (15) with (14b) and (12) with (17).

Aspectual markers: Habitual

- Czech (& Slovak) form ipf. habituals (18) (Filip 1993, Filip & Carlson 1997, Esvan 2007, Nübler 2017; the ‘third aspect’ (Kopečný 1962, Petr 1986b)). Reduplication: expressivity, time remoteness (19).

(18) a.	ps-á-t ^{IPF}	→	b. ps-á- va -t	(19)	ps-á- vá - va -t	(Cz)
	write-TH-INF		write-TH-HAB-INF		write-TH-HAB-HAB-INF	
	‘to write’		‘to write repeatedly’		‘to write repeatedly long ago’	

- Russian forms like *pis-yva-t* ‘write repeatedly’ classified as colloquial or archaic (Isačenko 1962, Paducheva 2015, but see Berger 2009, Tatevosov 2013).
(In Polish, forms like *pis-ywa-ć* ‘write repeatedly’ restricted to a few verbs (Grzegorzycykowa *et al.* 1984, Łaziński 2020)).

- Czech: also from secondary imperfectives:

(20) a.	vy-pis-ova-t ^{IPF}	→	b. vy-pis-ová- va -t ^{IPF}	(21)	jís/d- a -t	(Cz)
	out-write-SI-INF		out-write-TH-HAB-INF		eat-HAB-INF	
	‘to excerpt’		‘to excerpt repeatedly’		‘to eat repeatedly’	

- The marker outside the theme (18b) and SI (20b); hence outside LPs and lower SPs.
- Markers: -(v)a-, -e- (not productive); see Petr (1986a);
v in -va- because of hiatus; cf. (18-20) with (21).
- HABs form a subset of SI markers.

Aspectual markers: HAB ≠ SI

- Aspectual differences:

SI: pf. → ipf. versus **HAB:** ipf. → ipf.

SI: progressive and iterative/habitual versus **HAB:** iterative/habitual (generic).

- Nominalizations:

SI: OK versus **HAB:** *

(22) a. ps-a-n-í	b. vy-pis-ová-n-í	c.* ps-á-vá-n-í	(Cz)
write-TH-N/T-N.NOM	out-write-TH-N/T-N.NOM	write-TH-HAB-N/T-N.NOM	
‘writing’	‘excerpting’		

- Phonology:

Different markers after the theme:

(23) a. vy-pros-i-t ^{PF} →	b. vy-proš-ova-t ^{IPF}	c. pros-i-t ^{IPF} →	d. pros-í-va-t	(Cz)
out-beg-TH-INF	out-beg-SI-INF	beg-TH-INF	beg-TH-HAB-INF	
‘to beg’	‘to beg’	‘to beg’	‘to beg repeatedly’	

Aspectual markers: HAB ≠ SI

- Quantification:

SI: ipf. operator versus **HAB**: quantifier

- (24) a. Z dovolené **psal** třikrát. b. Z dovolené **psával** třikrát. (Cz)
from vacation wrote.he three.times from vacation wrote.he three.times
'From vacation, he sent a letter three times.' 'From vacation, he used to send a letter three times.'

- **SI**: iterated events versus **HAB**: quantifier with a restrictor and a nucleus.

[[-(v) a_{hab} -]] = almost always:

- (25) ALMOST ALWAYS [_{restrictor} he on vacation]; [_{nucleus} he sends a letter three times]

- Why? Quantification with exceptions. They are necessary:

- (26) # Člověk bý-**vá** smrtelný. (Cz)
man be-HAB.3SG mortal
'Man is almost always mortal.'

- -(v) a_{hab} - high in the clause; scopes over Q-adverbs:

- (27) Z dovolené psá**val** velmi zřídka. (Cz)
from vacation wrote.he very rarely

'It was almost always the case that when he was on vacation, he sent a letter very rarely.'

Aspectual markers: Semelfactive

- Marker: $-n(V)-$.

- Selects a punctual root and derives a pf. stem:

(28) a. krik-nu-t ^{PF}	(R)	(29) bod-nou-t ^{PF}	(Cz)
shout-SEML-INF		stab-SEML-INF	
‘to shout out’		‘to stab’	

- Differs from $-n(V)-$ of degree achievements and other $-n(V)-$ verbs: property roots, ipf. (e.g. Taraldsen Medová & Wiland 2019).

- Attaches to root $\sqrt{\quad}$ and verbalizes \rightarrow is v as other themes.

- Thus, complementary distribution of $-n_{\text{SEML}}-$ and SI (**krik-nu-va-t*) is not structural blocking (contrary to Markman 2018).

Rather a semantic reason; e.g. Jabłońska (2007): Semelfactives do not have a process for PROG.

Or better: SI is atelicizer/eventizer (e.g. Łazorczyk 2010, Tatevosov 2015, $\lambda R.\lambda e.\exists s[R(e)(s)]$), so it combines with complex events (accomplishments) and semelfactives are not of appropriate type.

Advantage: also explains incompatibility of SI and $-n-$ degree achievements: **sochnuvat*’.

- Why $-n_{\text{SEML}}-$ not compatible with HAB if HAB outside (e.g. **bod-nou-va-t*)?

Because HAB selects ipf. verbs.

Aspectual markers: MAG and hierarchy

- Data suggest:

(30) Morphological Aspect Generalization (MAG)

The morphological aspect is determined by the last attached aspectual morpheme.

A known fact; see e.g. Isačenko (1962), Zinova & Filip (2015), Tatevosov (2020).

- Hierarchy of aspectual morphemes:

Root nominalizations only with LPs, R: *pod-kop* ‘tunnel’ not ATT ‘little kick’

Cz: *pří-kop* ‘ditch’ not ATT ‘little kick’ (cf. Caha & Ziková 2016)

SEML only in stem nominalizations, Cz: *při-kop-nu-t-í* ‘pass’.

(31) [SP_{higher} [SI [SP_{lower} [SEML [√root [LP]]]]]]

- Where is **HAB**?

Stem nominalizations have AspP in Cz (Procházková 2006) contrary to R (Švedova 1980, Tatevosov 2011)

(32) ps-a-n-í^{IPF} / na-kup-ová-n-í^{S-IPF} / *na-koup-en-í^{PF} začalo, skončilo. (Cz)

writing / buying / buying started, ended

and higher SPs: *na-ház-en-í* ‘throwing a lot’, but not HAB: **ps-á-vá-n-í*.

Aspectual markers: MAG and hierarchy

- **SI in R:** *-yva-/-iva- -va-, -a-/-ja* - hard/soft

= *-iva-, -va-, -a-*

= *-iva-, -a-*

- hiatus

-a- in *-iv-a* is a conjugation marker (Jakobson 1948, Isačenko 1962, Matushansky 2009). *-iva-* based on the general *-Vva-* and stems with theme *-i-* (Kuznecov 1953, Wiemer & Seržant 2017). For South Slavic, see Lunt (2001), Milosavljević *et al.* (2021) + hiatus

= *-i-, -a-*

(36) *za-bol-e-va-t'* 'to become ill',

po-vy-talk-iva-t'

'to push out one after another'

SP	LP	√	v	SI	Voice	T
za		bol	e	a		t'
po	vy	talk	a	i	a	t'

- **SI in Cz:** *-ova-, -(v)a-, -(j)e-* = *-o-, -a-, -e-*

HABs in Cz: *-(v)a-, -e-* = *-a-, -e-*

(37) *vy-proš-ova-t* 'to beg'

pře-vy-chov-á-va-t 'to re-educate'

SP	LP	√	v	SI	Voice	T
	vy	pros/š	ĭ	o	a	t
pře	vy	chov	a/á	a		t

- HABs form a subset of SI markers & SIs of THs (v) in both R and Cz.

- **Grammaticalization** of THs to higher projections (cf. Roberts & Roussou 2003, Van Gelderen 2011)?

Analysis: Assumptions

AspP and features

- Only one Asp head responsible for interpretation.
- Stem nominalizations in R are agentive (ν P) & do not have AspP (Tatevosov 2020) → AspP above VoiceP.
- Asp: an unvalued interpretable asp-feature.
- Prefixes (both LPs and SPs): a valued uninterpretable asp-feature: pf.
SI: valued uninterpretable asp-feature: ipf.
SEML: valued uninterpretable asp-feature: pf.
HAB: no asp-feature.
 \checkmark and ν : no asp-feature; only \checkmark (pf.) in unprefixated verbs like *dat* ‘give’.
Contrary to Pesetsky & Torrego (2004), uninterpretable Fs are not offending, only unvalued Fs.
Uninterpretable Fs are just not readable (Zeijlstra 2009).
- Hierachy with aspect-Fs:

(38) $[_{AspP} \text{ Asp}_{unval} \text{ asp-F } [_{VoiceP} \text{ Agent } [_{Voice} [_{SPP} \text{ SP}_{pf} [_{SIP} \text{ SI}_{ipf} [_{SPP} \text{ SP}_{pf} [_{\nu P} \text{ SEML}_{pf} [_{\sqrt{P}} \checkmark [_{pP} \text{ LP}_{pf}]]]]]]]]]]]]]]]]]]$

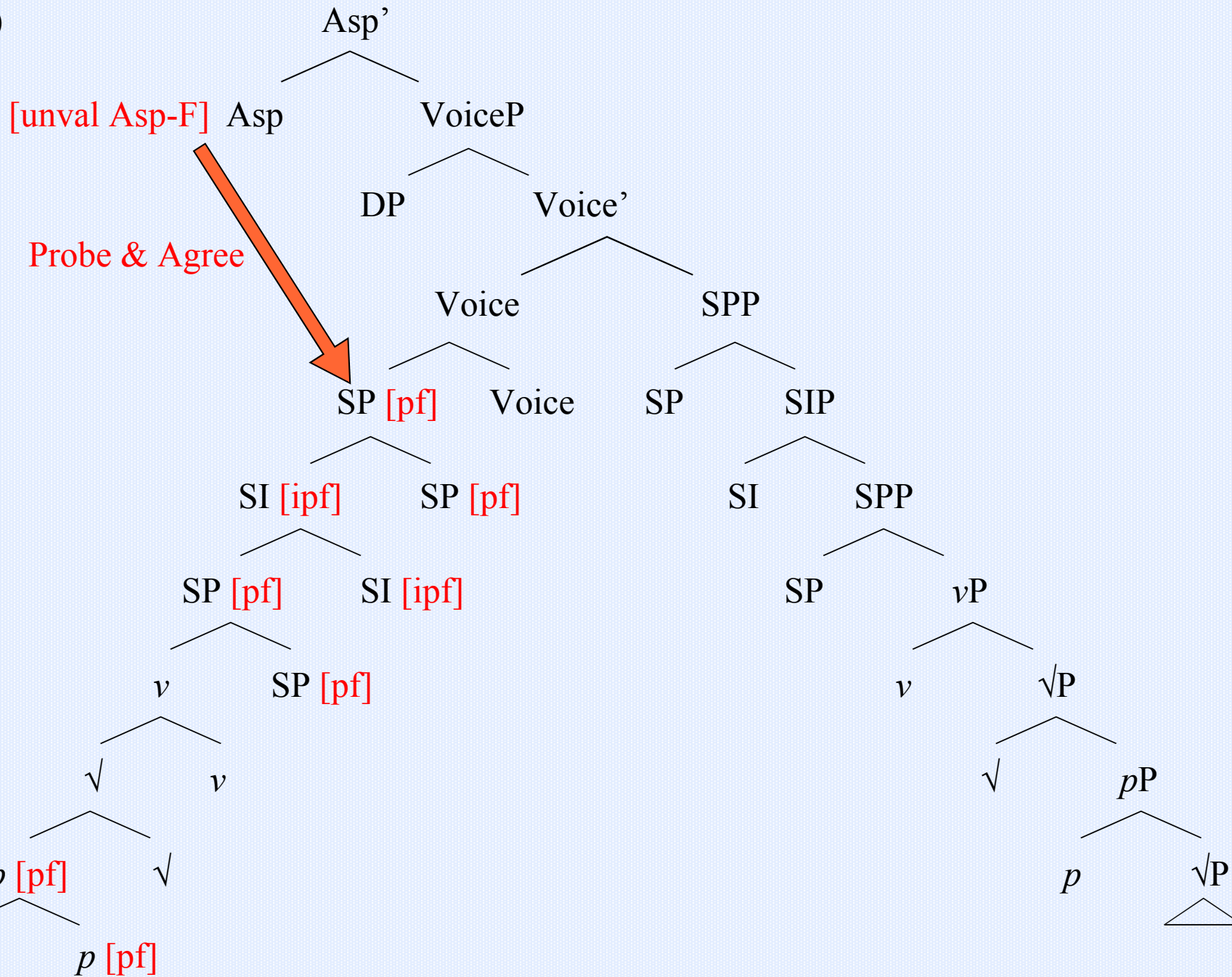
Analysis: Assumptions

Agree and dominance

- Only downward Agree.
HAB not found (is higher). No problem: ipf → ipf.
- No m-command.
- Agree can fail (Preminger 2011, 2014).
- The default interpretation of Asp is imperfective at the interface (default aspect in Slavic).
Derives imperfectivity with unprefixated predicates & without SEML, e.g. *čítat* ‘read’.
- Predicates derived by head movement (Gribanova 2015).
- Asp (asp-F) valued by the closest element (Biskup subm.).
- Minimality based on dominance.
- When Asp probes, the complex head is in Voice.

Deriving aspectual properties

(39)



Aspectual derivation and differences between R & Cz

- Differences in selection:

$po_{\text{DEL-}}$ in R: ipf.: * po -[ot - kry]^{IPF}- t' versus po -[ot - kry - va]^{IPF}- t'
in Cz: ipf. and pf.: po -[$vařit$]^{IPF}, po -[$odkrýt$]^{IPF}

- Differences in position:

$na_{\text{CUM-}}$ in R: also below SI: [[na - var - i]^{IPF}- va]^{IPF}- t'
in Cz: only above SI: $navřit$ ^{IPF} versus * $navřívát$ ^{IPF} / * $navřovat$ ^{IPF}; $napřepisovat se$ ^{IPF}

- Such differences do not affect MAG and the analysis.

- Differences in stem nominalizations:

in Cz: Asp present and derived as above.

in R: Asp not present and the uninterpretable features on aspectual markers are not offending.

Conclusions

- The aspectual value can change with the added aspectual morphology.
- The aspectual interpretation is determined by the last attached aspectual morpheme.
- Derived via Agree and head movement,
with minimality based on dominance in the complex verbal head.
- The last aspect morpheme is the highest head in the complex head with an aspect-F.
- Aspectual markers do not spell out Asp;
only license the corresponding aspectual operator in Asp.

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